

Aerojet Superfund Site

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ISSUE: The cleanup of extensive solvent contamination at the Aerojet site is affected by the discovery of perchlorate contamination. Perchlorate, a water-soluble component of solid rocket fuel, recently has been detected in 11 public drinking water wells outside of Aerojet's 8,500 acre facility at Rancho Codova 15 miles West of Sacramento. Seven drinking water wells with perchlorate at or above the California Action Level of 18 ppb have been removed from service. The extent of the plume migration offsite extends over two miles and is still under investigation. Perchlorate is known to interfere with thyroid functioning at high concentrations. The best assessment of environmental health effects on perchlorate is the provisional reference dose range (4 to 18 ppb) established by EPA's National Center for Environmental Assessment in 1995. The ability to detect perchlorate at concentrations below 400 ppb was developed in March, 1997. Technology for treating water supplies for perchlorate is very limited and what is available is in the pilot proofing stage.

CONCERNS:

- Current toxicological data for perchlorate is limited.
- Known health effects on thyroid and pituitary systems raise concerns for long term effects of low concentrations on children and adults with impaired thyroids.
- The drinking water of 40,000 people is threatened adjacent to Aerojet, and other recently discovered sources threaten the water supply of more than 10 million people in CA.
- Limited investigation outside CA and NV using the improved detection method.
- More work is needed to develop an economical, reliable treatment technology for perchlorate.

CURRENT STATUS: Aerojet will begin treating their highest concentration of perchlorate (for reinjection) in August 1998 using a bioremediation fluidized bed reactor treatment system. The system will be evaluated to determine if it is effective to 4 to 18 ppb. The perchlorate treatment facility has been designed with expansion capability from 4,000 to 8,000 gallons per minute.

The Perchlorate Study Group (PSG) chaired by Aerojet in partnership with the USAF are performing \$800,000 to \$1,450,000 in toxicity studies on perchlorate. Results are scheduled to be submitted for EPA (NCEA) review in 9/98. If the EPA performed the peer review (as early as 5/98), it would expedite the review cycle and instill public confidence in the review process.

FUTURE ACTIONS: By May 1998 Aerojet is to complete the evaluation of the extent of perchlorate migration offsite to the 4 ppb level. Upon completion of the feasibility study EPA will issue a interim groundwater record of decision. EPA will be expected to rapidly assess new toxicological data in 1998.

POLITICAL IMPLICATIONS: Loss of drinking water in any of the arid southwest is an explosive issue. The action level for perchlorate is a controversial subject for developers and PRP's who will want the action level as high as possible and the public who want the level as low as possible to protect their health.